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EXAMINER	
AHMED, SALMAN	
ART UNIT	**PAPER NUMBER**
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/039,158	SURAZSKI ET AL.	
	Examiner	Art Unit	
	Salman Ahmed	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 8/28/2006.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-36,38,40-42,44,46 and 47* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *35,36,38,40-42,44,46 and 47* is/are allowed.

6)☒ Claim(s) *1,3-9,13,15-17,21,23,24 and 27-34* is/are rejected.

7)☒ Claim(s) *10, 11, 12, 14, 18, 19, 20, 22, 25 and 26* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 December 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Claims 1, 3-36, 38, 40-42, 44, 46 and 47 are pending.

Claims 1,3-9, 13,15-17,21,23,24,27-34 are rejected.

Claims 10, 11, 12, 14, 18, 19, 20, 22, 25 and 26 are objected.

Claims 35, 36, 38, 40-42, 44, 46 and 47 are allowed.

Claim 2, 37, 39, 43, 45, and 48-51 have been cancelled by the Applicant.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1, 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davidson et al. (US PAT 6577862), hereinafter referred to as Davidson in view of Pace et al. (US PAT 4689506), hereinafter referred to as Pace.

In regards to claims 1, 5 and 7 Davidson teaches a system/method for managing communication impairments between Internet Protocol devices (column 3 lines 51-57, the BS receives the "silence" information from a terminal device and uses these samples of silence to take the place of what would otherwise be speech samples. These samples are converted into voice data items, and are then placed in the payload portion of IP packets), comprising: determining that noise is transmitted (column 4 lines 32-33, the steps of detecting silence in a communications channel); in response to the determination, sending a notice of the transmitted noise (column 4 lines 32-33, the steps of detecting silence in a communications channel, and transmitting a network SID); receiving the notice of transmitted (as in claim 5) noise (column 6 lines 51-53, a receiving device, typically a destination TCN, will then process the silence indicator, and, depending on the type of silence indicator received). In regards to claim 5, Davidson teaches the notice indicates that the noise is pending transmission.(column 4 lines 31-36, the steps of detecting silence in a communications channel, and transmitting a network SID. Then a network silence indicator (SID) is received, and comfort noise is produced).

In regards to claim 1 Davidson does not explicitly teach in response to the notice, granting priority to an outgoing signal over the transmitted noise. In regards to claim 7,

Davidson does not explicitly teach granting priority to the outgoing signal comprises refraining from attenuating the outgoing signal.

In regards to claims 1 and 7 Pace in the same field of endeavor teaches in response to the notice (column 1 lines 28-30, in response to a control signal supplied from the control circuit), granting priority to an outgoing signal over the transmitted noise (column 1, lines 34-37, the transmit attenuator is operated at maximum gain while the receive attenuator is operated at maximum attenuation to inhibit a receive signal).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Davidson's system/method by incorporating the steps of granting priority to an outgoing signal over in coming signal as taught by Pace. The motivation is that (as suggested by Pace, column 1 lines 14-45) the automatic control of attenuator circuits is frequently required in the design of telephones and other audio products. For example, contemporary speakerphones are typically operated in a half-duplex mode of operation wherein transmission and reception of speech audio signals is not permitted simultaneously. Hence, at any particular time, the speakerphone is either in a transmit mode, idle mode or receive mode as is well understood. In order to provide the required half-duplex operation the speakerphone includes a pair of attenuators, a transmit attenuator circuit placed in the transmit signal path of the speakerphone and a receive attenuator circuit in the receive signal path thereof. The transmit and receive attenuators are controlled by a single circuit and are complementary in function, i.e., in response to a control signal supplied from the control circuit, one is operated at maximum gain while the other is operated at maximum attenuation and vice versa. The

two attenuators are never both on or both off. Thus, for instance, if the user is speaking, the speakerphone is placed in the transmit mode wherein the transmit attenuator is operated at maximum gain while the receive attenuator is operated at maximum attenuation to inhibit a receive signal from adversely affecting the transmission of the speech signal from the user. Similarly, in response to a controlling received audio signal the receive attenuator is automatically switched to maximum gain while the transmit attenuator is operated at maximum attenuation. In the idle mode, whenever audio signals are neither being transmitted or received, the gains of both the transmit and receive channels are reduced to some mid value thereof. Such technique creates a reliable and efficient transmission while maintaining required quality of service.

4. Claims 8, 15, 16, 17 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davidson in view of Pace as applied to claim 1 above, and further in view of Sicher et al. (US PAT 6385195), hereinafter referred to as Sicher.

In regards to claims 15 and 16 Davidson teaches a system for managing communication impairments between Internet Protocol devices (column 3 lines 51-57, the BS receives the "silence" information from a terminal device and uses these samples of silence to take the place of what would otherwise be speech samples. These samples are converted into voice data items, and are then placed in the payload portion of IP packets), comprising: receiving a notice of transmitted noise (column 6 lines 51-53, a receiving device, typically a destination TCN, will then process the silence

indicator (as in claim 16), and, depending on the type of silence indicator received). Davidson teaches sending a notice signal, the notice signal (column 6 lines 14-15, detects silence in the upstream communication channel of the air interface, and then produces a network SID).

In regards to claim 15, Davidson does not explicitly teach in response to the notice, granting priority to an outgoing signal over the transmitted noise. In regards to claims 8 and 17 Davidson does not explicitly teach refraining from attenuating the outgoing signal.

In regards to claims 15 and 17, Pace in the same field of endeavor teaches in response to the notice (column 1 lines 28-30, in response to a control signal supplied from the control circuit), granting priority to an outgoing signal over the transmitted noise (column 1, lines 34-37, the transmit attenuator is operated at maximum gain while the receive attenuator is operated at maximum (as in claim 17) attenuation to inhibit a receive signal).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Davidson's system/method by incorporating the steps of granting priority to an outgoing signal over in coming signal as taught by Pace. The motivation is that (as suggested by Pace, column 1 lines 14-45) the automatic control of attenuator circuits is frequently required in the design of telephones and other audio products. For example, contemporary speakerphones are typically operated in a half-duplex mode of operation wherein transmission and reception of speech audio signals is not permitted simultaneously. Hence, at any particular time, the speakerphone is either in a transmit

mode, idle mode or receive mode as is well understood. In order to provide the required half-duplex operation the speakerphone includes a pair of attenuators, a transmit attenuator circuit placed in the transmit signal path of the speakerphone and a receive attenuator circuit in the receive signal path thereof. The transmit and receive attenuators are controlled by a single circuit and are complementary in function, i.e., in response to a control signal supplied from the control circuit, one is operated at maximum gain while the other is operated at maximum attenuation and vice versa. The two attenuators are never both on or both off. Thus, for instance, if the user is speaking, the speakerphone is placed in the transmit mode wherein the transmit attenuator is operated at maximum gain while the receive attenuator is operated at maximum attenuation to inhibit a receive signal from adversely affecting the transmission of the speech signal from the user. Similarly, in response to a controlling received audio signal the receive attenuator is automatically switched to maximum gain while the transmit attenuator is operated at maximum attenuation. In the idle mode, whenever audio signals are neither being transmitted or received, the gains of both the transmit and receive channels are reduced to some mid value thereof.

In regards to claim 15, Davidson and Pace teach a comfort noise generating scheme as described above.

In regards to claim 15, Davidson and Pace do not explicitly teach that noise has been transmitted by the Internet Protocol device. In regards to claims 8, 21 Davidson in view of Pace does not explicitly teach using RTP for notice.

In regards to claim 15, Sicher in the same field of endeavor teaches (column 7 lines 34-39) generating safe comfort noise speech frames, which are transmitted toward the mobile station when no speech frames are available in the buffer, or when no speech frames have been received within the next mobile speech frame interval. In regards to claims 8 and 21 Sicher teaches (column 7 lines 47-59) using RTP for communication.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Davidson and Pace's system/method by incorporating the steps of comfort noise transmission as taught by Sicher. The motivation is that (as suggested by Sicher, column 1 lines 14-25), recently, Internet (Internet Protocol (IP)-based) telephone products and services have been introduced that promise enhanced speech quality and connectivity to other Internet subscribers and to regular (non-IP) telephone subscribers. With increases in Internet bandwidth and the deployment of enhanced IP-based, real-time protocols (RTP) and reservation protocols (RSVP), the Internet is poised to eventually offer the type of speech quality that standard land-line subscribers have come to expect. As such generating comfort noise during silence is a type of qos that is expected by subscribers. By sending comfort noise as well as SID makes this process more reliable. In regards to claim 8, the motivation is that (as suggested by Sicher, column 7 lines 47-59) FIG. 4 is a communications protocol stack illustrating a connection a Real Transport Protocol (RTP) 32 is a real-time protocol which is currently being standardized. The RTP protocol runs independently of the network infrastructure and provides payload identification, sequence numbering, time stamping, and delivery

monitoring. Thus, the RTP protocol 32 makes a direct connection between the E-IWF 14 and the Internet ES 31 at the session and presentation layers of the OSI protocol stack.

5. Claims 3, 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davidson in view of Pace as applied to claim 1 above, and further in view of Weaver (US PAT PUB 2003/0063578).

In regards to claims 3, 4 and 6 Davidson and Pace teach a comfort noise generating scheme as described in the rejections of claim 1 above.

In regards to claims 3 and 6 Davidson and Pace do not explicitly teach receiving a second notice communication signal; and in response to the second notice, accepting the transmitted communication signal. In regards to claim 4, Davidson and Pace does not explicitly teach detecting that the communication signal is transmitted and that the transmission of the noise has been halted; and in response to the detection, sending the second notice of the transmitted communication signal.

Weaver in the same field of endeavor teaches (page 3, section 0029) once a voice signal is again detected at 110, a stop packet is sent to the receiving computer at 112, signaling the receiving computer to discontinue the production of comfort noise. The stop packet (as in claim 4) may be either a token packet containing some type of data other than voice or sound data, or may be the first voice data packet corresponding to a new conversational phrase (as in claim 6).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Davidson and Pace's system/method by incorporating the steps of transmitting stop packet as taught by Weaver. The motivation is that (as suggested by Weaver, page 3, section 0029) once a voice signal is again detected at 110, a stop packet is sent to the receiving computer at 112, signaling the receiving computer to discontinue the production of comfort noise thus enhancing the voice qulity.

6. Claims 9, 13, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davidson in view of Pace as applied to claims 1 and 15 above, and further in view of Oh (US PAT 5933495).

In regards to claims 9, 13 and 23 Davidson teaches the signal generated by the first endpoint for transmission to a second endpoint (column 5 lines 3-5, transmits a network Silence Indicator (SID)); in response to the detection, sending a notice signal to the second endpoint, the notice signal indicating that the echo signal is being masked (column 6 lines 24-30, a network SID algorithm is used to send the SID frame as a network SID across the mobile communications network in an ATM cell, IP packet, or other type of data transmission payload. The destination MGW/IUW then performs the expansion of the network SID to generate comfort noise). In regards to claims 23, 24 Davidson teaches a control means (figure 2 elements 272, 274 and column 6 lines 32-33, network SID algorithm) and communication means (column 7 line 8, destination TCN).

In regards to claims 9 and 23 Davidson does not explicitly teach in response to the notice signal, prioritizing, over the masked echo signal, any outgoing signal

transmitted by the second endpoint. In regards to claim 13, Davidson does not explicitly teach refraining from attenuating the outgoing signal.

In regards to claims 9 and 23 Pace in the same field of endeavor teaches in response to the notice (column 1 lines 28-30, in response to a control signal supplied from the control circuit), granting priority to an outgoing signal over the transmitted noise (column 1, lines 34-37, the transmit attenuator is operated at maximum gain (as in claim 13) while the receive attenuator is operated at maximum attenuation to inhibit a receive signal).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Davidson's system/method by incorporating the steps of granting priority to an outgoing signal over in coming signal as taught by Pace. The motivation is that (as suggested by Pace, column 1 lines 14-45) the automatic control of attenuator circuits is frequently required in the design of telephones and other audio products. For example, contemporary speakerphones are typically operated in a half-duplex mode of operation wherein transmission and reception of speech audio signals is not permitted simultaneously. Hence, at any particular time, the speakerphone is either in a transmit mode, idle mode or receive mode as is well understood. In order to provide the required half-duplex operation the speakerphone includes a pair of attenuators, a transmit attenuator circuit placed in the transmit signal path of the speakerphone and a receive attenuator circuit in the receive signal path thereof. The transmit and receive attenuators are controlled by a single circuit and are complementary in function, i.e., in response to a control signal supplied from the control circuit, one is operated at

maximum gain while the other is operated at maximum attenuation and vice versa. The two attenuators are never both on or both off. Thus, for instance, if the user is speaking, the speakerphone is placed in the transmit mode wherein the transmit attenuator is operated at maximum gain while the receive attenuator is operated at maximum attenuation to inhibit a receive signal from adversely affecting the transmission of the speech signal from the user. Similarly, in response to a controlling received audio signal the receive attenuator is automatically switched to maximum gain while the transmit attenuator is operated at maximum attenuation. In the idle mode, whenever audio signals are neither being transmitted or received, the gains of both the transmit and receive channels are reduced to some mid value thereof thus making the system efficient.

In regards to claims 9 and 23 Davidson and Pace teach sending notice signal as described above.

Davidson and Pace do not explicitly teach masking of an echo signal by a first endpoint for notice signal.

Oh in the same field of endeavor teaches (column 8, lines 7-15) the spectrum reshaping technique uses noise spectrum. The purpose of the spectrum reshaping technique is to produce a comfort noise that closely matches the background noise characteristics. The spectrum reshaping technique reshapes the spectrum of the current signal, which contains the audible residual echo signal, based on the noise

spectrum estimate. By reshaping the spectrum, the signal sounds similar to the background noise.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Davidson and Pace's system/methid by incorporating the steps of using echo signal to generate background noise. The motivation is that (as suggested by Oh, column 8, lines 7-15) the purpose of the spectrum reshaping technique is to produce a comfort noise that closely matches the background noise characteristics. The spectrum reshaping technique reshapes the spectrum of the current signal, which contains the audible residual echo signal, based on the noise spectrum estimate. By reshaping the spectrum, the signal sounds similar to the background noise thus improving the voice quality.

7. Claims 27, 28, 29, 31 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nayak (US PAT PUB 2003/0078767), in view of Beyda et al. (US PAT 5995607), hereinafter referred to as Beyda.

In regards to claims 27, 28, 29, 31 and 33 Nayak teaches a method for managing communication Impairments between an Internet Protocol phone (page 1 section 0009, voice telephony) and an Internet Protocol (page 1 section 0009, IP networks) device (page 1 section 0009, VoIP may be defined as voice over Internet Protocol, which includes any technology that enables voice telephony (as in claim 31) over IP networks), comprising: receiving a status signal (page 6, section 0137, Input data, including voice and silence/background data, is received, at step 110) and in

response to the status signal, suppressing transmission of any comfort noise (as in claim 33) to the phone (page 6, section 0137, at step 112, "near end" speech activity, i.e., that portion of speech or voice data at the front end or beginning of the voice/speech data, is determined. If a positive response is elicited, then G7xx encoding occurs, at step 114. Further, codeword data is sent to the channel (transmitted to the decoder) at step 116, and the state of the system may be returned to receive input data, at step 110). In regards to claim 29 Nayak teaches in response to the status signal (as in claim 29), inserting a comfort noise to the phone (page 6, section 0137, if a negative response is elicited, Comfort Noise Generator adaptation occurs, at step 118. Filter Parameter encoding then sends SID to the channel (transmitted to the decoder), at step 120, and the state of the system may then be returned to receive input data, at step 110. In short, FIG. 1 illustrates a manner in which the input data may be classified as speech or silence and accordingly where speech codeword or SID are sent respectively to the channel to be transmitted to the decoder).

In regards to claim 27 and 28 Nayak does not explicitly teach status signal indicates that the phone is operating as a speakerphone. In regards to claim 34, Nayak does not explicitly teach status signal is sent before the phone begins operating as a speakerphone.

In regards to claim 27 and 28 Beyda in the same field of endeavor teaches status signal indicates that the phone is operating as a speakerphone (column 2 lines 33-36, the call requirements assessor is configured to detect a protocol element which is transmitted from a telephone (as in claims 28) upon activation of a speaker phone

feature and/or a conference-call feature of a telephonic device). In regards to claim 34, Beyda teaches status signal is sent before the phone begins operating as a speakerphone (column 7 line 34, attempted activation).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system/method of Nayak by incorporating the speaker phone detection scheme and handset mode detection scheme as taught by Beyda. The motivation is that (as suggested by Beyda, column 2 lines 31-55) the inherent characteristics of a speaker-phone call introduce more ambient noise into a call connection than a call in which the caller utilizes a telephone handset. Although an Internet telephony call provides a sufficient quality of service for a handset call, the additional ambient noise introduced in a speaker-phone call degrades the voice transmission quality to an unacceptable extent. As such Beyda's scheme makes the voice quality better.

8. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nayak, in view of Beyda, in view of Iyengar.

In regards to claim 30 Nayak and Beyda teach a comfort Noise generation method as described in the rejections of claim 27 above.

In regards to claim 30 Nayak, and Beyda do not explicitly teach speaker phone conducting half-duplex operation.

Iyengar in the same field of endeavor teaches that the phone is operating as a half-duplex mode (column 2 lines 36-49, transmission of break-in indicia).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system/method of Nayak and Beyda by incorporating the half-duplex detection scheme as taught by Iyengar. The motivation is that (as suggested by Iyengar, column 7 lines 60-67, column 8 lines 1-8) in half-duplex mode, a transmit break-in attempt occurs, for example, when the base unit 500 is transmitting information packets, and the user of the remote handset 502 user wishes to speak via a speakerphone function in the remote handset 502. The voice signal received by the microphone 102 and processed by the other components in the transmit path of the remote handset If is it determined that a transmission from the remote handset 502 is to occur, the received signal (i.e., the voice data packets traveling opposite to the transmit direction) needs to be substantially immediately switched OFF. A BREAK-IN control bit is sent in the next information packet to the base unit 500 indicating that a break-in has occurred. As such, Iyengar's method improves the voice quality of a system.

9. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nayak, in view of Beyda as applied to claim 27 above, and further in view of Sicher

In regards to claim 32 Nayak and Beyda teach methods of comfort noise generation as described in the rejections of claim 27 above above.

Nayak and Beyda do not explicitly teach using RTP for notice.

Sicher in the same field of endeavor teaches (column 7 lines 47-59) using RTP for communication.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Nayak and Beyda's system/methodby incorporating the steps of comfort noise transmission notice in RTP as taught by Sicher. The motivation is that (as suggested by Sicher, column 7 lines 47-59) FIG. 4 is a communications protocol stack illustrating a connection a Real Transport Protocol (RTP) 32 is a real-time protocol which is currently standardized. The RTP protocol runs independently of the network infrastructure and provides payload identification, sequence numbering, time stamping, and delivery monitoring. Thus, the RTP protocol 32 makes a direct connection between the E-IWF 14 and the Internet ES 31 at the session and presentation layers of the OSI protocol stack. As such RTP protocol is very efficient.

Allowable Subject Matter

10. Claims 10, 11, 12, 14, 18, 19, 20, 22, 25 and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. Claims 35, 36, 38, 40-42, 44, 46 and 47 are allowed.

Response to Arguments

12. Applicant's arguments, see pages 10-13 of the Remarks section, filed 8/28/2006, with respect to the rejection of claims 1, 3-9, 23, 24 and 27-34 have been fully considered and are not persuasive.

<u>*Regarding claims 1-26:*</u> *The Applicant argues (see page 11, 2nd paragraph) that claim 1 as amended recites "determining that noise is transmitted; in response to the determination, sending the notice of the transmitted noise, receiving a notice of the transmitted noise; and in response to the notice, granting priority to an outgoing signal over the transmitted noise." Applicants respectfully submit that the combination of Davidson and Pace do not teach these limitations. Specifically, neither Davidson nor Pace teach determining if a noise is transmitted and in response to the determination, sending a notice of transmitted noise. The Office Action states that column 6 lines 51-53 of Davidson teaches this limitation, however this s incorrect. This passage from Davidson only discloses the detection of silence on a communications channel, not transmitted noise. The detection of silence is not the same as the detection of transmitted noise. As evidence of this, Davidson teaches producing comfort noise upon detection of silence. As a result, combining this teaching with that of Pace would not result in Applicants' limitation of determining that noise is transmitted and granting priority to an outgoing signal over the transmitted noise. Instead, the combination of Davidson and Pace as suggested by the Office Action would result in attenuating an outgoing or incoming signal over silence. This is clearly not Applicants' limitation.*

However, examiner respectfully disagrees with these assertions. The Examiner respectfully points out in the Applicant's specification (page 14 lines 13-26) where it states "processing block 36 transmits a notice signal 39 to IP phone 14 through notice signal path 40". It is the Examiner's understanding that the notice packet is <u>not</u>

transmitted noise as suggested above in the argument. Rather as the specification states, "Notice signal 39 may indicate the production and/or transmission of masked echo signal 37,or insertion of comfort noise 35. Pace does teach giving priority to the outgoing signal over transmitted noise (transmitted from the other side). Pace teaches in response to the notice (column 1 lines 28-30, in response to a control signal supplied from the control circuit), granting priority to an outgoing signal over the transmitted noise (column 1, lines 34-37, the transmit attenuator is operated at maximum gain while the receive attenuator is operated at maximum attenuation to inhibit a receive signal). Pace teaches (column 1, lines 34-37) the transmit attenuator is operated at maximum gain while the receive attenuator is operated at maximum attenuation to inhibit a receive signal). Pace further suggests (column 1 lines 14-15) the automatic control of attenuator circuits is frequently required in the design of telephones and other audio products. Davidson teaches his invention using a mobile phone 110, which could be any terminal device (Figure 1). As such Davidson's mobile phone uses attenuator as per Pace's teaching (column 1 lines 14-15). The Examiner respectfully points out that the above description provides appropriate evidentiary support of Examiner's position.

<u>Regarding claims 27-34:</u> *The Applicant argues (see page 12 first and second paragraphs) as recited by Claim 27, Nayak or Beyda contains no reference or suggestion to suppressing the transmission of comfort noise, as recited by Claim 27. Comfort Noise Generator adaptation is not the same as suppressing transmission of comfort noise. Nayak teaches determining "near end" speech activity" and responding with either G7xx encoding or Comfort Noise Generator Adaptation. The*

Applicant argues Neither Nayak nor Iyengar, nor their combination teach "a means for inserting, in response to the status signal, a silent signal into a signal transmitted by the device to the phone."

However, Examiner respectfully disagrees with this assertion. Nayak teaches in page 24 section 0229 a full duplex speaker phone module 1614, while Beyda teaches (column 2 lines 33-36) the call requirements assessor is configured to detect a protocol element which is transmitted from a telephone upon activation of a speaker phone feature and/or a conference-call feature of a telephonic device. The present claim language is broad and in view of the broadest reasonable interpretation of this language, Nayak does teach *suppressing the transmission of comfort noise* and *a means for inserting, in response to the status signal, a silent signal into a signal transmitted by the device to the phone* (page 6, sections 0136-0137, To improve the compression of the system, CNG may adapt to the background noise perceived between portions of speech data and create silence insertion descriptors (SID) representative of characteristics of the perceived noise, when the speech is inactive, as illustrated in FIG. 1. [0137] Input data, including voice and silence/background data, is received, at step 110. At step 112, "near end" speech activity, i.e., that portion of speech or voice data at the front end or beginning of the voice/speech data, is determined. If a positive response is elicited, then G7xx encoding occurs, at step 114. Further, codeword data is sent to the channel (transmitted to the decoder) at step 116, and the state of the system may be returned to receive input data, at step 110. If a negative response is elicited, Comfort Noise Generator adaptation occurs, at step 118.

Filter Parameter encoding then sends SID to the channel (transmitted to the decoder), at step 120, and the state of the system may then be returned to receive input data, at step 110. In short, FIG. 1 illustrates a manner in which the input data may be classified as speech or silence and accordingly where speech codeword or SID are sent respectively to the channel to be transmitted to the decoder.

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Salman Ahmed whose telephone number is (571)272-8307. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Art Unit 2616

SA
09/08/2006

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